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(58) **Field of Classification Search**

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See application file for complete search history.

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(2013.01); ***H01L 29/155*** (2013.01); ***H01L***
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(57)

ABSTRACT

A solution for forming an ohmic contact to a semiconductor layer is provided. A masking material is applied to a set of contact regions on the surface of the semiconductor layer. Subsequently, one or more layers of a device heterostructure are formed on the non-masked region(s) of the semiconductor layer. The ohmic contact can be formed after the one or more layers of the device heterostructure are formed. The ohmic contact formation can be performed at a processing temperature lower than a temperature range within which a quality of a material forming any semiconductor layer in the device heterostructure is damaged.

20 Claims, 7 Drawing Sheets

